

WHAT IS CLAIMED IS:

1. A method of preparing a lower extremity of a femur and implanting a femoral slideway thereon, the method comprising:

providing a femoral slideway having at least one peg adapted for insertion into a hole in the femur;

locating a point on a lower extremity of a femur, said point being located at a pre-determined distance from a plane tangent to dorsalmost points of lateral and medial condyles of the femur;

drilling a hole at said point;

selecting a femoral slideway having a dimension defined by a perpendicular distance between a longitudinal axis of a peg extending from the slideway and a plane tangent to a dorsal sliding surface furthest away from the peg;

wherein said pre-determined distance is larger than said dimension.

2. The method of Claim 1, further comprising resecting bone material from the femur and fitting the slideway onto the femur by inserting the peg into the hole.

3. The method of Claim 1, wherein said pre-determined distance is about 5% to about 15% larger than said dimension.

4. The method of Claim 3, wherein said pre-determined distance is about 10% larger than said dimension.

5. The method of Claim 1, wherein said locating is performed before said drilling.

6. The method of Claim 1, wherein said selecting a femoral slideway further comprises selecting a slideway with a dimension between a dorsal sliding surface and a ventral sliding surface which is a previously-determined percent of a distance between a dorsal-most condylar surface and a ventral-most condylar surface of the femur before said resecting.

7. The method of Claim 6, wherein said percent is about 2 to 5%.

8. The method of Claim 1, wherein selecting further comprises selecting a femoral slideway from a group of slideways, wherein all of the slideways in said group have

substantially equal peg-to-sliding-surface dimensions as defined by a perpendicular distance between a longitudinal axis of a peg extending from the slideway and a plane tangent to a dorsal sliding surface furthest away from the peg; and wherein each slideway in said group has a different dorsal condyle-to-ventral condyle distance.

9. A method of preparing a lower extremity of a femur for implantation of a femoral slideway, said method comprising:

determining a location for a pair of holes to be drilled in a lower surface of a femur bone by indicating points at a previously-determined distance from a dorsal-most point of a condyle of said femur;

wherein said previously-determined distance is about 5 to 15% larger than a distance between a peg and a dorsal sliding surface of the femoral slideway to be implanted on said femur bone;

drilling a hole in a lower surface of a femur bone at said points;

resecting bone material from said femur, wherein said resecting includes removing more bone material from a dorsal side of the femur than will be replaced by the slideway

implanting the slideway on the femur by inserting the peg into the hole.

10. The method of Claim 9, wherein said previously-determined distance is about 10% larger than a distance between a peg and a dorsal sliding surface of the femoral slideway to be implanted on said femur bone.

11. The method of Claim 10, wherein the distance between the peg and the dorsal sliding surface of the femoral slideway is between about 24 mm and about 34 mm.

12. The method of Claim 11, wherein the distance between a peg and a dorsal sliding surface of the femoral slideway is between about 29 mm.

13. The method of Claim 10, wherein said previously-determined distance is between about 26.4 mm and about 37.4 mm.

14. The method of Claim 13, wherein the previously-determined distance is about 32 mm.

15. The method of Claim 9, wherein said previously-determined distance is between about 30.45 mm and about 33.35 mm.

16. A method of implanting a femoral slideway on a femur, said method comprising:

providing a slideway comprising two convexly curved condyle shells rigidly connected to one another anteriorly by a patellar shield, wherein outer surfaces of the condyle shells define dorsal sliding surfaces of the femoral slideway, wherein the femoral slideway has on an inner surface at least one peg, wherein between a long axis of the peg or pegs and a point on a dorsal sliding surface furthest away therefrom a sliding-surface-to-peg distance is defined, and wherein an overall extent of the femoral slideway in an anterior-posterior direction is smaller than a corresponding original overall extent of the condyles of a femur to which the femoral slideway is fitted;

resecting bone material from a femur, wherein said resecting includes removing more bone material from a dorsal side of the femur than is replaced by the slideway;

providing at least one hole in said femur to receive said at least one peg of said slideway and to secure and locate said slideway on said femur; and

fitting said slideway onto said femur.

17. The method of Claim 16, wherein said resecting includes removing about 10% more bone material from the dorsal side of the femur than is replaced by the slideway, as measured linearly between said holes and a dorsalmost surface of said femur.

18. The method of Claim 16, further comprising positioning a femur-size template on said femur to determine the position of said at least one hole in the femur.

19. The method of Claim 18, wherein said femur-size template comprises a dorsal condyle-engaging surface and at least one bore separated by a pre-determined distance.

20. The method of Claim 19, wherein said pre-determined distance is about 5 to 15% larger than a perpendicular distance between said at least one peg and said dorsal sliding surfaces.

21. The method of Claim 20, wherein said pre-determined distance is about 10% larger than a perpendicular distance between said at least one peg and said dorsal sliding surfaces.